abcam

ab198610

Alexa Fluor® 647 Anti-alpha Actinin 4 antibody [EPR2533(2)] - Cytoskeleton Marker

Recombinant RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR2533(2)
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	This product gave a positive signal in MCF7 cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min)

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information ACTN4

Function	F-actin cross-linking protein which is thought to anchor actin to a variety of intracellular structures. This is a bundling protein (Probable). Probably involved in vesicular trafficking via its association with the CART complex. The CART complex is necessary for efficient transferrin receptor recycling but not for EGFR degradation (PubMed:15772161). Involved in tight junction assembly in epithelial cells probably through interaction with MICALL2. Links MICALL2 to the actin cytoskeleton and recruits it to the tight junctions (By similarity). May also function as a transcriptional coactivator, stimulating transcription mediated by the nuclear hormone receptors PPARG and RARA (PubMed:22351778). Association with IGSF8

regulates the immune synapse formation and is required for efficient T-cell activation (PubMed:22689882).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Alpha Actinin 4 sometimes referred to as ACTN4 or alpha-actinin is a protein with a mass of approximately 100 kDa. It functions as an actin-binding protein particularly involved in the crosslinking of actin filaments. This protein is expressed widely with high levels found in muscle kidney and brain tissues. Alpha-actinin 4 also plays important roles in cellular structure and integrity by binding actin filaments in various cellular contexts.
Biological function summary	The role of alpha-actinin 4 extends to maintaining cytoskeletal structure and cell motility. It forms part of the larger actin-binding complex that supports cellular adhesion and mechanical stability. By linking actin filaments it allows cells to withstand mechanical stress and maintain their shape. Additionally alpha-actinin 4 contributes to cellular processes like cytokinesis and signal transduction by serving as a scaffold for signaling proteins.
Pathways	Alpha-actinin 4 interacts with diverse cellular signaling mechanisms. Key pathways include the actin cytoskeleton signaling and integrin-mediated cell adhesion. In these pathways alpha-actinin 4 works alongside proteins such as integrins and vinculin facilitating communication between the extracellular matrix and the cytoskeleton. These interactions are critical for cellular responses to environmental stimuli and adaptation during movement or development.
Associated diseases and disorders	Alpha-actinin 4 has notable impacts on conditions like focal segmental glomerulosclerosis (FSGS) and cancer. In FSGS mutation or dysregulation of alpha-actinin 4 contributes to podocyte dysfunction leading to proteinuria and kidney damage. Its role in cancer often involves altered expression influencing cell migration and invasion. The interaction with other proteins like nephrin in FSGS or E-cadherin in cancer highlights the significance of alpha-actinin 4 in pathogenic processes.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

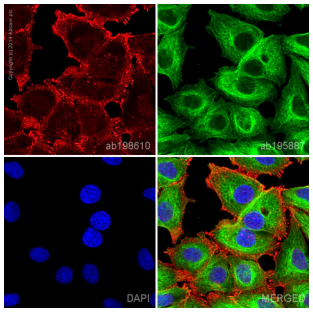
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-alpha Actinin 4 antibody [EPR2533(2)] - Cytoskeleton Marker (ab198610)

Alpha Actinin 4 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-alpha Actinin 4 antibody

ab198610 staining alpha Actinin 4 in MCF7 cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab198610 at a 1/100 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at a 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

This product also gave a positive signal under the same testing conditions in MCF7 cells fixed with 100% methanol (5 min).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.